

REMARKS

Claims 1-22 are pending. Claims 1-11 and 14-18 have been amended and new claims 19-22 have been added to recite additional features of the embodiments disclosed in the specification. In addition, the title was changed to the one recommended by the Examiner and the antecedent basis problem in claim 3 was corrected.

Applicants submit that the objection to the Declaration is improper because the rule to which the Examiner is referring regarding the duty of disclosure only applies to applications filed after June 1, 2008. For applications filed before this date including the present application, the rule has been waived. See the Patent Office Notice attached to this letter.

In the Office Action, claims 1, 4, 11, and 13 were rejected under 35 USC § 102(b) for being anticipated by the Kasahara publication. Applicants request the Examiner to withdraw this rejection for the following reasons.

Claim 1 recites that the frame interval includes “a plurality of selective erasing sub-fields and a plurality of selective writing sub-fields.” In addition to these features, claim 1 recite that the controlling step includes “setting a number of selective erasing sub-fields to be larger than a number of selective writing sub-fields in a first operation mode, and setting a number of selective writing sub-fields to be larger than a number of selective erasing sub-fields in a second operation mode.”

The Kasahara publication discloses detecting the extent of motion of a picture displayed on a screen of a plasma display panel. If the extent of motion is large, the picture is detected to be a TV picture. And, if the extent of motion is small, the picture is detected to be a PC picture. (See Paragraphs [94] and [114]). Kasahara also discloses that when the amount of contour noise in a picture (e.g., a TV picture), the number of sub-fields for controlling display of that picture is increased. (See Paragraph [118] and Tables 14-20).

Thus, the Kasahara publication changes a sub-field arrangement based on the amount of contour noise in a picture, e.g., whether the picture is a TV picture or PC picture. However, Kasahara does not disclose that a frame interval for generating its picture includes **both** selective erasing sub-fields and selective writing sub-fields, i.e., “a plurality of selective erasing sub-fields and a plurality of selective writing sub-fields.” Rather, Kasahara discloses that all the sub-fields in its frame are selective writing sub-fields. This is evident from Figure 7 which shows that the pulse applied during the address period turn on, and thus generates a selective writing discharge, in a corresponding display cell.

Also, the Kasahara publication does not disclose “setting a number of selective erasing sub-fields to be larger than a number of selective writing sub-fields in a first operation mode, and setting a number of selective writing sub-fields to be larger than a number of selective erasing sub-fields in a second operation mode.” Rather, as previously indicated, Kasahara merely changes the number of selective writing sub-fields in each of its frames to reduce contour noise.

See Figure 10A of Kasahara having twelve sub-fields in TV mode, compared with Figure 10B having 10 sub-fields in PC mode.

Because the Kasahara publication does not disclose all the features of claim 1, it is respectfully submitted that Kasahara does not anticipate this claim or any of its dependent claims. Applicants further submit that none of the secondary references cited by the Examiner teach or suggest the features of claim 1 missing from Kasahara.

For example, the Shigeta patent discloses dividing a frame of data into sub-fields for driving a plasma display panel. In accordance with the embodiments shown in Figures 9-14, some of the sub-fields are selective erasing sub-fields (e.g., SF4a and SF4b) and other sub-fields are selective writing sub-fields (e.g., SF7a and SF7b). Some of the selective writing sub-fields are positioned just after one of the selective erasing sub-fields, e.g., SF7a comes after SF4a.

Using this arrangement, the selective writing sub-field can use the remaining wall charges produced by the selective erasing sub-field to perform a cell selection operation. This allows for the number of reset periods in the frame to be reduced. Contour noise is also reduced by this arrangement. (See column 8, line 42 - column 10, line 35 and Figures 9-14).

Thus, the Shigeta patent discloses a frame having both selective writing and selective erasing sub-fields. The numbers of selective writing and selective erasing sub-fields may be different in different embodiments (compare Figures 9-13). However, Shigeta does not teach or suggest the features of claim 1 missing from the Kasahara publication. That is, Shigeta does not teach or suggest "setting a number of selective erasing sub-fields to be larger than a number of

selective writing sub-fields in a first operation mode, and setting a number of selective writing sub-fields to be larger than a number of selective erasing sub-fields in a second operation mode.”

The Boger and Otohe patents also fail to teach or suggest these features.

Absent a teaching or suggestion of these features, Applicants submit that claim 1 and its dependent claims are allowable over Kasahara taken alone or in combination with Shigeta or any of the other references of record. Withdrawal of the § 102 and § 103 rejections based on the Kasahara patent is therefore respectfully requested.

Dependent claim 8 recites that “if said first operation mode is an AV mode in which a motion extent of said data is large, then setting the number of selective erasing sub-fields to be greater than the number of selective writing sub-fields to reduce contour noise at a moving picture relative to the second operation mode, and if said second operation mode is a PC mode in which a motion extent of said data is small, then setting the number of selective writing sub-fields to be larger than the number of selective erasing sub-fields to increase a gray level expression range relative to the first operation mode.”

Claims 11 and 16 recite features similar to those which patentably distinguish claims 1 and 8 from the applied references. Applicants therefore submit that claims 11 and 16 and the other claims that depend from claim 11 are allowable.

Claim 9 recites controlling a number of sustaining pulses within a frame interval differently in response to said selected operation mode. If the operation mode is “selected to be a PC mode in which a motion extent of said data is small relative to an AV mode, then the

number of sustaining pulses within the frame interval is set to be smaller than a number of sustaining pulses set in correspondence with the AV mode in which a motion extent of said data is large relative to the PC mode.”

In addition, claim 9 recites that “the reduction in the number of sustaining pulses in PC mode is set to reduce an average brightness to within a predetermined range compared with an average brightness achieved during AV mode.” These features are not taught or suggested in the Kasahara publication.

The Shigeta patent discloses using different sub-field arrangements, each of which includes selective writing and selective erasing sub-fields. Different embodiments use different numbers of sub-fields. However, Shigeta does not teach or suggest that in PC mode, “the number of sustaining pulses within the frame interval is set to be smaller than a number of sustaining pulses set in correspondence with an AV mode in which a motion extent of said data is large relative to the PC mode.” Moreover, Shigeta does not teach or suggest that “the reduction in the number of sustaining pulses in PC mode is set to reduce average brightness to within a predetermined range compared with average brightness achieved during AV mode.”

The Otobe patent also fails to teach or suggest these features. At column 42, Otobe discloses changing a sub-field arrangement to one having a greater number of gradation levels based on contour noise. However, Otobe does not teach or suggest the features added by amendment to claim 9, including reducing the number of sustaining pulses in PC mode to be smaller than the number of sustaining pulses in AV mode, wherein the reduction in PC mode is

set to reduce average brightness to within a predetermined range relative to average brightness achieved during AV mode.

Based on at least the foregoing differences, Applicants submit that claim 9 and its dependent claims are allowable. Claim 17 recites features similar to those added by amendment to claim 9. Accordingly, it is submitted that claim 17 and its dependent claims are allowable.

Claims 10 and 18 recite that the predetermined reduction range is 50% through 80% of the average brightness in AV mode. These features are not taught or suggested by the cited references, whether taken alone or in combination.

The Examiner issued a obviousness-type double-patenting rejection of claims 1, 2, 4-10, and 11-17 based on the claims of the same number in U.S. Patent Application No. 10/968,037. Applicants traverse this rejection on grounds that the amendments presented in this paper cause claims 1, 2, 4-10, and 11-17 to be non-obvious variants of the claims in the '037 application. Withdrawal of the double-patenting rejection is respectfully requested.

New claims 19-22 have been added to the application.

Claim 19 recites that setting the number of selective erasing sub-fields to be larger than the number of selective writing sub-fields corresponds to a first number of gray levels that are capable of being generated, and wherein setting the number of selective writing sub-fields to be larger than the number of selective erasing sub-fields corresponds to a second number of gray levels that are capable of being generated, the second number of gray levels being greater than the first number of gray levels. These features are not taught or suggested by the cited

references, whether taken alone or in combination.

Claim 20 recites that the selective writing sub-fields select on cells using binary coding and the selective erasing sub-fields select off cells using linear coding, and wherein a number of gray levels capable of being generated by the selective erasing sub-fields using linear coding is less than a number of gray levels capable of being generated by the selective writing sub-fields. These features are not taught or suggested by the cited references, whether taken alone or in combination.

Claim 21 recites that a last one of the selective erasing subfields does not have a reset period and other ones of the selective writing sub-fields have a reset period. These features are not taught or suggested by the cited references, whether taken alone or in combination.

Claim 22 recites that a last one of the selective writing sub-fields does not have an erasure period and other ones of the selective writing sub-fields has an erasure period. These features are not taught or suggested by the cited references, whether taken alone or in combination.

In view of the foregoing amendments and remarks, it is respectfully submitted that the application is in condition for allowance. Favorable consideration and timely allowance of the application is respectfully requested.

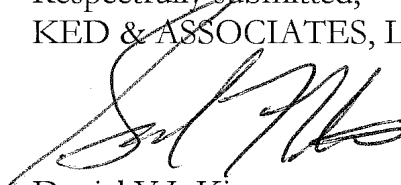
To the extent necessary, a petition for an extension of time under 37 CFR § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this, concurrent and future replies, including extension of time fees, to Deposit Account 16-0607 and

Serial No. 10/743,802
Reply to Office Action of January 2, 2008

Docket No. YHK-0128

please credit any excess fees to such deposit account.

Respectfully submitted,
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A handwritten signature in black ink, appearing to read 'Daniel Y.J. Kim', is written over the printed name.

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Duty of Disclosure Language Set Forth in Oaths or Declarations Filed in Nonprovisional Patent Applications

Summary:

The United States Patent and Trademark Office (Office) will no longer accept as complying with 37 CFR 1.63(b)(3) an oath or declaration that does not acknowledge a duty to disclose information material to patentability as defined in 37 CFR 1.56. All oaths or declarations filed on or after June 1, 2008, will be required to include the language expressly set forth in 37 CFR 1.63, including that in 37 CFR 1.63(b)(3). This notice applies to oaths or declarations filed in all nonprovisional patent applications, including reissue applications.

Background:

Current 37 CFR 1.63 sets forth the requirements for an oath or declaration filed in a nonprovisional patent application. 37 CFR 1.63(b)(3) sets forth what the person making the oath or declaration must state when acknowledging the duty of disclosure. Specifically, 37 CFR 1.63(b)(3) requires persons making an oath or declaration to state that they acknowledge their duty to disclose to the Office all information known to the person to be "material to patentability as defined in § 1.56." This language is incorporated in: 37 CFR 1.153, which sets forth the requirements for an oath or declaration in a design application; 37 CFR 1.162, which sets forth the requirements for an oath or declaration in plant patent applications; and 37 CFR 1.175 which sets forth the requirements for an oath or declaration in a reissue application.

In 1992, the Office amended 37 CFR 1.63 to conform to amendments made in 37 CFR 1.56. See Duty of Disclosure, 57 FR 2021 (January 17, 1992) (final rule). The amendments to 37 CFR 1.63(b)(3) resulted in "material to patentability as defined in § 1.56" replacing "material to the examination of the application in accordance with § 1.56(a)." Despite this amendment to 37 CFR 1.63(b)(3), some applicants in their oaths or declarations continue to use "material to the examination of the application" in place of "material to patentability," and "in accordance with § 1.56(a)" in place of "as defined in § 1.56." In response to proper objections made during the examination of pending patent applications, practitioners have argued that the oaths and declarations executed by applicants with the outdated language in question are proper and meet the requirements set forth in 37 CFR 1.63 in view of Comment 38 and the accompanying Reply in the 1992 Final Rule. See Duty of Disclosure at 2027. Additionally, these practitioners have argued that the outdated language should be accepted because the Office has not routinely enforced strict compliance with current 37 CFR 1.63, as evidenced by the number of pending patent applications and issued patents containing oaths or declarations with the outdated "material to examination" and "in accordance with 37 CFR 1.56(a)," language.

Revised Procedure:

With this Notice, the Office is putting applicants and their representatives on notice that compliance with the express language of 37 CFR 1.63 will now be required. Additionally, to the extent the Reply to Comment 38 in the 1992 Final Rule authorized the continued use of the "material to examination" and "in accordance with 37 CFR 1.56(a)," language, this authorization it is hereby rescinded, and reliance on the Reply to Comments 38 will no longer be accepted. If an oath or declaration filed on or after June 1, 2008, does not include the express language set forth in 37 CFR 1.63(b)(3), the Office will object to the oath or declaration as failing to comply with 37 CFR 1.63. A supplemental oath or declaration pursuant to 37 CFR 1.67 will then be required.

For pending applications, the Office is hereby *sua sponte* waiving the express language requirement of 37 CFR 1.63(b)(3), where the oath or declaration was filed prior to June 1, 2008. The express language of 37 CFR 1.63(b)(3) is waived only to the extent necessary such that an oath or declaration containing the "material to examination" or "in accordance with § 1.56(a)" language, or both, will be accepted as acknowledging the applicant's duty to disclose information "material to patentability" as defined in 37 CFR 1.56.

For continuing applications filed under 37 CFR 1.53(b), other than continuation-in-part applications, the Office will accept an oath or declaration that contains the outdated language if the oath or declaration otherwise complies with 37 CFR 1.63, and either: (1) was filed prior to June 1, 2008; or (2) is being filed in a continuation or divisional application in which a claim for benefit under 35 U.S.C. 120 has been made to a prior-filed copending nonprovisional application, and the oath or declaration is a copy of the previously accepted oath or declaration that was filed prior to June 1, 2008.

For issued patents, the Office is hereby waiving *nunc pro tunc* the express language requirement of 37 CFR 1.63(b)(3), where the oath or declaration was filed prior to June 1, 2008. As stated above, the express language of 37 CFR 1.63(b)(3) is waived only to the extent necessary such that an oath or declaration containing the "material to examination" or "in accordance with § 1.56(a)" language, or both, will be accepted as acknowledging the applicant's duty to disclose information "material to patentability" as defined in 37 CFR 1.56. Any supplemental oath or declaration filed for an issued patent may simply be placed in the patent application file without review or comment.


While not required, patentees and applicants are free to submit newly executed oaths or declarations with the language expressly set forth in current 37 CFR 1.63(b)(3), in accordance with 37 CFR 1.67.

Applicants are advised that, notwithstanding the waiver in the preceding paragraphs, an applicant who has not disclosed information that is material to patentability as defined in current 37 CFR 1.56, because it was believed that the information was not "material to examination," should disclose such information in order

to discharge the applicant's duty of disclosure as required by 37 CFR 1.56, and should file a supplemental oath or declaration acknowledging that duty of disclosure.

Questions about this notice may be directed to the Office of Patent Legal Administration at (571) 272-7701 or electronic mail message to PatentPractice@uspto.gov.

Date: 11/22/08



JON W. DUDAS

Under Secretary of Commerce for Intellectual Property and
Director of the United States Patent and Trademark Office